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7590 Mark A. Litman & Associates, P.A. York Business Center, Suite 205 3209 West 76th St. Edina, MN 55435			EXAMINER LAZORCIC, JASON L	
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RECORD OF ORAL HEARING  
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

*Ex parte* WAYNE O. DEUESCHER

Appeal 2009-007054  
Application 10/824,107  
Technology Center 1700

Oral Hearing Held: Tuesday, September 15, 2009

Before JEFFREY T. SMITH, MICHAEL P. COLAIANNI and  
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

ON BEHALF OF THE APPELLANTS:

**MARK. A. LITMAN**  
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1           The above-entitled matter came on for hearing on Tuesday,  
2   September 15, 2009, commencing at 9:32 a.m., at the U.S. Patent and  
3   Trademark Office, 600 Dulany Street, Alexandria, Virginia, before Kevin  
4   Carr, Notary Public.

5           JUDGE SMITH: Good morning, Mr. Litman.

6           MR. LITMAN: Good morning, Your Honors.

7           JUDGE SMITH: As you know, we will be making a transcript  
8   of today's proceedings that will be added to the record.

9           MR. LITMAN: That'll be fine.

10          JUDGE SMITH: Also, you have 20 minutes to present your  
11   argument. After you settle in you may begin.

12          MR. LITMAN: Yes, sir. I've been a practicing attorney for 37  
13   years now and I think I've got the rules down.

14          This rejection has an overwhelming failure in it from the  
15   beginning. What the claimed invention is is the formation of liquid droplets  
16   of a potentially abrasive material, releasing the liquid droplets while they are  
17   liquid, and then hardening them while they are in a round shape. This can be  
18   done either by irradiating them while they're falling in the air, dropping them  
19   into an oil base and irradiating them or heating them, or a hundred different  
20   methods. But the invention is taking the liquid dispersion of the solidifiable  
21   material as a sphere and hardening it after it's out of the mold while it's a  
22   liquid. In the mold it's liquid. Out of the mold it's a liquid as a droplet to  
23   form a sphere.

1           The entire foundation of the rejection relies on the Berg patent  
2 as a reference. Berg fails in every single regard with respect to teaching  
3 formation of a spherical particle. It is physically impossible according to the  
4 teachings of Berg to 1) form a spherical particle and 2) Berg releases a solid  
5 particle out of the mold, which is the reason why it can't form a spherical  
6 particle. We talk about releasing a droplet of liquid out of the mold. That is  
7 in every single claim on this appeal.

8           What the Examiner has done is said because Berg has 30%  
9 water in his particles, they are liquid. This absolutely contradicts specific  
10 teachings of what Berg intends to do and does do. I'll point out specifically  
11 for example column 4. Looking at the detailed description of the invention  
12 in column 4, lines 41 through 53 particularly at the end it says, "The term  
13 precursor of abrasive particle" -- and this is a term used in every claim of  
14 Berg and every description of Berg -- "The term precursor of abrasive  
15 particle means the un-centered particle produced by removing a sufficient  
16 amount of a volatile component from the dispersion when it is in the mold  
17 cavity to form a solidified body having the shape corresponding  
18 approximately to the shape of the mold cavity." Forming a solidified body.

19           This exact type of language is again repeated on column 7 in  
20 even stronger terms. In column 7 line 14, "A sufficient amount of a volatile  
21 component must be removed from the dispersion to bring about  
22 solidification thereof, thereby forming a precursor of an abrasive particleY"  
23 dada dada. The precursor of an abrasive particle was also previously defined  
24 as solid.

1               So Berg is clearly dealing in the formation of a solid particle in  
2 the mold, and in releasing the solid particle from the mold. Looking at the  
3 figures of Berg, particularly where it's most clearly shown in perspective as  
4 in FIG. 2 you can see is what Berg has is a flat plate with an etched shape  
5 therein. He puts the dispersion into those openings, solidifies it within the  
6 openings -- they tend to shrink as much as 20% according to Berg -- turns  
7 them all over and dumps them out and the particles come out as solids. Berg  
8 also specifically states elsewhere in the specification at column 10, lines 12  
9 to 20, even though he's talking about shapes -- triangular, rectangular,  
10 circular, elliptical or the like -- this is the cross-section. And he says in that  
11 particular area as a front face, and a back face, which are the same. Meaning  
12 they are flat because he's using a flat mold. You cannot put a liquid into a  
13 mold, and he scrapes the surface of it to keep it level, and have anything but  
14 at least one surface of that material flat. He cannot make a sphere. Plus he  
15 hardens the material within the mold. That is exactly the opposite of what is  
16 claimed in the present invention.

17               If you look at our description, the first claim that is on appeal  
18 that has not been withdrawn states ejecting the liquid mixture volume from  
19 the cell sheet --

20               JUDGE SMITH: Excuse me, Mr. Litman. Where in your  
21 specification do you make this description of liquid volume mixtures as  
22 being ejected?

23               MR. LITMAN: Unfortunately, I do not have the specification  
24 with me but everywhere in the invention, including the examples we talk

1 about -- All right for example original claim 2. The cell sheet holes from  
2 cell sheet volumes is recited. Mixing materials into a liquid solution, putting  
3 the liquid solution into the cell sheet holes to form the liquid mixture  
4 solution to form mixture volumes. This language is also literally in the  
5 specification itself. They're in the original claims as filed also.

6 JUDGE SMITH: I noticed that the word liquid was added by  
7 amendment, is that correct?

8 MR. LITMAN: Yes, to emphasize more clearly what was  
9 being done. But in the original claims as filed liquid was there. If you look  
10 at claim 4 for example, "Where in the solidification environment after it has  
11 been removed from the mold is a dehydrating liquid." But liquid was added  
12 in the prosecution to assure that we are absolutely clear in distinguishing  
13 what is going on here. The fact of the matter is we are talking about forming  
14 a spherical particle. It's impossible to form a spherical particle from the  
15 liquid dispersion without it becoming a droplet at some point, unless  
16 somehow or another you dye mold from two sides a single droplet -- and we  
17 are talking about micron sub millimeter sized particles -- so it's an absurd  
18 process to even think of it.

19 But again getting back to the claim, ejecting the liquid mixture  
20 volume from the cell sheet by subjecting the liquid mixture volume  
21 contained in each cell to an impinging jet of fluid. Berg also teaches  
22 solidifying the particles in the mold and then it shrinks, and then it falls out.  
23 Column 10, lines 2 through 6. Berg is doing everything with a solid material  
24 to form the particle. Berg's process, which is the basis of the rejection,

1 cannot do what we say is forming a sphere, number one. Number two; Berg  
2 has the liquid solidified in the mold. Our claims require ejecting the liquid  
3 mixture volume from the mold. Two totally incompatible events.

4           If you ejected material from Berg you would not be forming the  
5 specific materials he's intending to form which are shaped, abrasive  
6 particles. A defined cross-section, even when those cross-sections are round  
7 or circular, he does not have a sphere. He cannot form a sphere looking at  
8 FIG. 2. He talks about a "truncated sphere", but what that is is a disc -- a  
9 segment taken out of the sphere. It's flat on two sides. It is not a sphere. It's  
10 a disc. Our terms are limited to a sphere.

11           The Examiner attempts after this aggressive extension of the  
12 teachings of Berg -- Let's get to the point where the Examiner says, "all  
13 materials having 30% water are liquid." That is false. Common chemical  
14 knowledge will show you that even hydrated salts, which are solid, and have  
15 35% water in them. Having water in it does not make it a liquid. Jell-O has  
16 90% water in it. It's a gel; exactly what Berg also forms. It is not a liquid.  
17 It is a gel. It is not a liquid. It is absolutely clear that in no way does the  
18 argument that the Examiner says that what Berg is using after his hardening  
19 is a liquid. It's impossible. Berg says solidifying the material, and then  
20 grinding the material. I can conceive of no way of grinding water. It's like  
21 pushing rope -- it's just not going to work.

22           The Examiner then cites Zhai as teaching an inherency of  
23 sphericity in Berg. It's impossible. Berg clearly has no spheres. Zhai shows  
24 a totally different process of what is known as prilling -- spraying liquid into

1 the air to dehydrate them to form spheres. Berg is not forming spheres, does  
2 not want to form a sphere and even talks about the fact of what should be  
3 avoided in the process as having rounded edges. This is specifically  
4 addressed later on when he states it is important to avoid excessive rapid  
5 drying of the particle because that would cause edges to break off and  
6 become rounded. Column 7, lines 39 through 45.

7           So Berg is particularly avoiding rounding of edges because he  
8 wants an abrasive face or edge to work with. So even if Zhai were  
9 meaningful with regard to what Berg teaches, Berg is a failure. To say okay  
10 let's eliminate the process of Berg and prill the materials that he has and  
11 form pelletized particles, it's totally different than what Berg has. More  
12 importantly when you prill -- when you spray in the air, you get a large  
13 distribution of droplet sizes.

14           The whole purpose of our process is to form uniform particle  
15 spherical sizes. By taking a screen, pressing liquid through it, having  
16 droplets come out through uniform openings in the screen, you get fairly  
17 uniform droplets coming out. If you prill -- which has nothing to do with  
18 Berg whatsoever and goes directly against the teachings of Berg, and cannot  
19 be combined with them -- you would get these non-uniform droplets. Then  
20 you end up with large particles that are wasted and even more small particles  
21 are wasted. And with the present technology, particularly when we're  
22 dealing with something like diamond grade abrasive particles, where you  
23 have diamond material in with the spheres, you're not going to want to waste  
24 it and have that kind of wastage.



1                   More importantly Zhai teaches nothing that can be used with  
2 Berg. Berg forms particles in a flat mold to get specific shapes. That's the  
3 purpose of the invention. You destroy the invention of Berg by attempting  
4 to prill. And even if you do prill and spray droplets, you get a wide range of  
5 dispersion of particle sizes. If the Examiner is attempting to argue that gels  
6 are liquids, this is not the case, as we all know. Literature citation has been  
7 provided on that basis which is well known in the art.

8                   JUDGE SMITH: It's noted that you cited several references in  
9 your Brief that were not submitted in the evidence appendix, is that correct?

10                  MR. LITMAN: That's correct. They were not as prior art as  
11 such but merely to show the common definition of terms. Zhai cannot  
12 establish any basis for inherency and is also incompatible with the teachings  
13 of Berg. The one thing that I absolutely want to get across is and I think I've  
14 mentioned it is the fact that Berg requires solidification of his material  
15 within the mold. It's a sine qua non in the performance of the Berg  
16 invention. Every claim we have on appeal talks about hardening a droplet of  
17 liquid into a sphere. Mixing materials into a liquid and ejecting the liquid  
18 mixture volumes. That's inherent language. We create a liquid mixture. We  
19 have a volume within the cells. We eject the liquid mixture from that  
20 volume. It's not a novel combination of technical terms as such. It's  
21 describing the physical event. And all of these are clear, non-technical  
22 terms. A liquid mixture in a volume is ejected. That is all it is.

1 JUDGE SMITH: In its simplest form what you're saying is it's  
2 like dropping water out of a medicine dropper. If you take one drop it's  
3 going to eject and a sphere is going to form.

4 MR. LITMAN: Yes. Except here we have cell sheets with  
5 holes in it.

6 JUDGE SMITH: Right.

7 MR. LITMAN: We are getting a lot of droplets coming out  
8 with uniform holes in these cells, and getting uniform droplets. And in this  
9 way you can make rapidly large numbers of uniform, spherical particles.

10 JUDGE SMITH: So if you will, your similarity to Berg is that  
11 you both have cell sheets however the material that's going inside of Berg  
12 solidifies before exiting versus yours being in a liquid state upon exit.

13 MR. LITMAN: Because he wants, as a purpose of his  
14 invention, to form a shaped particle -- a specified shape. And that specified  
15 shape is given in the mold. If you use a mesh screen, you could have square  
16 holes. But when you push the droplets through, they will by natural surface  
17 tension, form a sphere. So in our process it isn't even necessary to have a  
18 round hole or a mesh with circular holes in it. They could be square. They  
19 can be triangular. It will still form a spherical particle. Because the purpose  
20 of the invention is to have that liquid by its own surface tension form a  
21 sphere. That is what is so critical about the failure of Berg. Because he  
22 hardens in the mold, and when he shakes it out of that mold he cannot form a  
23 sphere. It's already hard.

1 JUDGE SMITH: Is there any other argument that you would  
2 like to present? I noticed that there are numerous rejections and Berg is in  
3 every single one of them.

4 MR. LITMAN: I think that alone fully defines the underlying  
5 failure. No other reference is cited, except for Zhai, which I addressed, as  
6 trying to show sphericity. And the fact is if you take the knowledge of Zhai  
7 and try to apply it to Berg you destroy the Berg patent. You cannot prill and  
8 practice Berg.

9 JUDGE SMITH: Are there any other questions? No other  
10 questions.

11 MR. LITMAN: Thank you very much.

12 (Whereupon, at 9:54 a.m., the proceedings were concluded.)